

LISTING SHOWING THE AMENDMENT TO THE CLAIMS

This listing replaces all prior listings of claims.

IN THE CLAIMS

Amend the claims as follows:.

1 (Currently amended). An organic capacitor having voltage-controlled capacitance, comprising at least the following functional layers:

- a first electrode (2), a second electrode (5), and
- an insulator layer (4) disposed between the first and second electrodes (2, 5), wherein

~~characterized by~~

at least one first semiconductor layer is located (3) ~~provided~~ between the first and second electrodes (2, 5), and wherein

- the concentration of free charge carriers in at least said first semiconductor layer (3) is varied in a controlled manner by application of a voltage (U_{52}) between said first and second electrodes (2, 5),
- the concentration of said charge carriers ~~determining~~ the capacitance of the capacitor, and
- the concentration of said free charge carriers in at least said first semiconductor layer (3) is additionally varied in a controlled manner by a frequency of the applied voltage (U_{52}).

2 (Currently amended). An organic capacitor as defined in claim 1, **~~characterized in that~~** wherein the variation of the concentration of said free charge carriers results in a variation of an effective spacing (a) of the electrodes (2, 5) serving as capacitor plates, and said effective spacing (a) functionally determines the capacitance.

3 (Currently amended). An organic capacitor as defined in ~~any one of the previous claims, characterized in that~~ claim 2 wherein the variation of the concentration of said free charge carriers results in a variation of an effective plate surface area, and said effective plate surface area functionally determines the capacitance.

- 4 (Currently amended). An organic capacitor as defined in claim 1 wherein any
~~one of the previous claims, characterized in that~~ at least one of said first and
second electrodes (2, 5) is a structured electrode (2', 5').
- 5 (Currently amended). An organic capacitor as defined in claim 4 wherein any
~~one of the previous claims, characterized in that the~~ at least one of said first
and second structured electrodes (2', 5') is embedded in said semiconducting
layer (3).
- 6 (Currently amended). An organic capacitor as defined in claim 1 any one of the
~~previous claims, characterized in that~~ wherein said organic capacitor
comprises a second semiconductor layer (6) ~~provided~~ located between said
first and second electrodes (2, 5) and disposed on one of the sides of said
insulator layer (4) opposite said first semiconductor layer (3), the concentration
of said free charge carriers in said second semiconductor layer (6) being
varied in a controlled manner by applying a voltage (U_{52}) between said first
and second electrodes (2, 5).
- 7 (Currently amended). An organic capacitor as defined in claim 6, **characterized**
~~in that~~ wherein said first and second semiconducting layers (3, 5) are of
opposed conductance types.
- 8 (Currently amended). An organic capacitor as defined in claim 6 ~~or claim 7,~~
~~characterized in that~~ wherein at least one of said first and second electrodes
is a structured electrode and the at least one ~~of said first and second~~
structured electrodes (2', 5') is embedded in at least one of said first and
second semiconductor layers (3, 6).
- 9 (Currently amended). An organic capacitor as defined in claim 1 wherein any
~~one of the previous claims, characterized in that~~ at least one of said
functional layers is a layer of an organic substance.